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MEDIUM-MU TWIN TRIODE

9-PIN MINIATURE TYPE

For "on-off" control applications involving long periods of operation under cutoff conditions

GENERAL DATA

Electrical:

Heater, Pure Tungsten, for Unipotential Cathodes: ←

Heater arrangment	*Series*	*Parallel*	
Voltage	12.6 ± 10%	6.3 ± 10%	ac or dc volts
Current	0.15	0.3	amp

Microphonism. . . . . Not Tested

Direct Interelectrode Capacitances (Approx.):°

	Unit No.1	*Unit No.2*	
Grid to plate	1.5	1.5	μμf
Grid to cathode and heater. .	1.9	1.9	μμf
Plate to cathode and heater .	0.5	0.35	μμf
Grid of unit No.1 to grid of unit No.2	0.1 max.		μμf

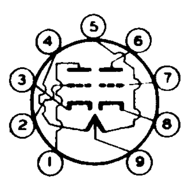
Characteristics, Class A_1 Amplifier (Each Unit): ←

Plate Voltage	67.5	volts
Grid Voltage.	0	volts
Amplification Factor.	21	
Plate Resistance (Approx.).	6600	ohms
Transconductance.	3200	μmhos
Plate Current	8.5	ma

Mechanical:

Mounting Position . . . . Any
Maximum Overall Length. . . . . 2-3/16"
Maximum Seated Length . . . . 1-5/16"
Length, Base Seat to Bulb Top (Excluding tip) 1-9/16" ±3/32"
Maximum Diameter. 7/8"
Dimensional Outline . . . . *See General Section*
Bulb. T-6-1/2
Base. . . . . Small-Button Noval 9-Pin (JETEC No.E9-1) ←
Basing Designation for BOTTOM VIEW. 9A

Pin 1 - Plate of Unit No.2
Pin 2 - Grid of Unit No.2
Pin 3 - Cathode of Unit No.2
Pins 4 & 9 - Heater of Unit No.2
Pins 5 & 9 - Heater of Unit No.1



Pin 6 - Plate of Unit No.1
Pin 7 - Grid of Unit No.1
Pin 8 - Cathode of Unit No.1
Pin 9 - Heater Mid-Tap

° Without external shield.

← Indicates a change.

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

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MEDIUM-MU TWIN TRIODE

FREQUENCY DIVIDER IN COMPUTER SERVICE and "ON-OFF" CONTROL SERVICE

Values are for Each Unit

Maximum Ratings, *Absolute Values:*

PLATE VOLTAGE	250 max.	volts
GRID VOLTAGE:		
Negative bias value	100 max.	volts
Positive bias value	0 max.	volts
Peak negative value	200 max.	volts
PLATE DISSIPATION	2.5 max.	watts
GRID INPUT	0.5 max.	watt
CATHODE CURRENT:		
Peak	100 max.	ma
DC	20 max.	ma
PEAK HEATER-CATHODE VOLTAGE:		
Heater negative with respect to cathode	90 max.	volts
Heater positive with respect to cathode	90 max.	volts
BULB TEMPERATURE (At hottest point on bulb surface)	120 max.	°C

Typical Operation as Frequency Halfer:

	Cutoff Condition	*Zero-Bias Condition*	
Plate-Supply Voltage	150	150	volts
Grid Voltage	-15	0	volts
Plate-Circuit Resistance	20000	20000	ohms
Grid-Circuit Resistance	47000	47000	ohms
Plate Current	0	5.1	ma

Maximum Circuit Values:

Grid-Circuit Resistance:		
For fixed-bias operation	0.5 max.	megohm
For cathode-bias operation	1.0 max.	megohm

→ **CHARACTERISTICS RANGE VALUES FOR EQUIPMENT DESIGN**

	Note	*Min.*	*Max.*	
Cutoff Condition				
Plate Current	1	-	50	μamp
Difference in Plate Current Between Units	-	-	50	μamp
Zero-Bias Condition				
Plate Current	2	4.6	5.4	ma
Difference in Plate Current Between Units	-	-	0.8	ma

Note 1: For conditions with 12.6 volts on heater, plate-supply volts = 150, grid-supply volts = -15, plate-circuit resistance (ohms) = 20000, and grid-circuit resistance (ohms) = 47000.

Note 2: Conditions are same as for Note 1 except that grid-supply volts = 0.

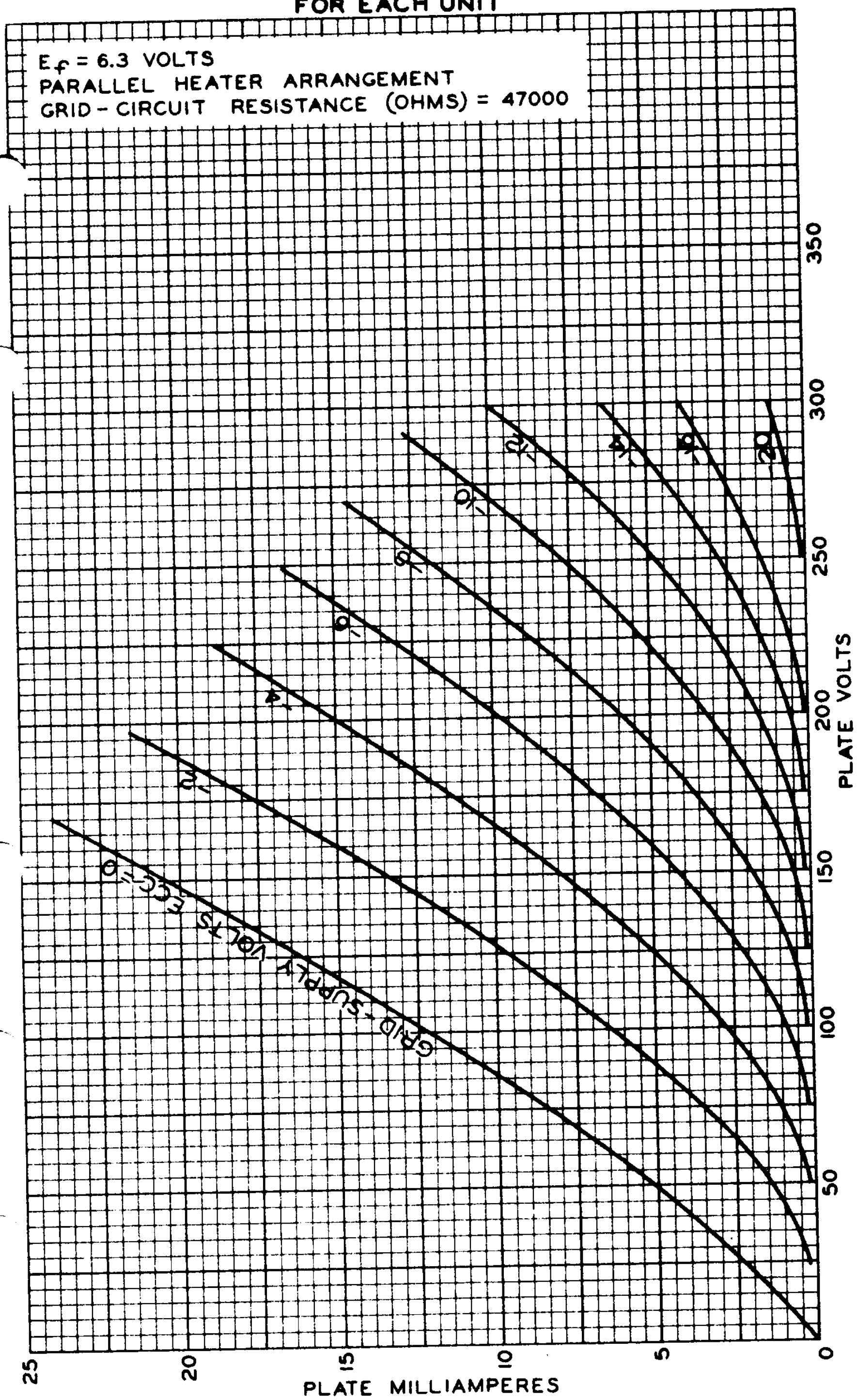
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AVERAGE OPERATION CHARACTERISTICS
FOR EACH UNIT



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